SHORE POWER PROJECT AT THE PORT OF MONTREAL

PROJECT DESCRIPTION

On July 31, 2015, the governments of Canada and Quebec together with the MPA announced the allocation of new funds for the installation of shore power at the Port of Montreal. The total cost of the project is $11 million, allocated as follows:

- Government of Canada (Shore Power Technology for Ports Program): $5 million
- Government of Quebec program to improve marine, air and rail transportation efficiency to reduce GHG emissions (PETMAF en matière de réduction des émissions de GES): $3 million
- Montreal Port Authority (MPA): $3 million

POSITIVE IMPACTS

This project reflects the MPA's commitment by improving its environmental footprint and producing the following positive impacts in terms of sustainable development and service offerings to its clients:

Reduction of GHG emissions (when completed, this project will offset virtually all GHG emissions for which the MPA is responsible):

- Shore power for wintering vessels: a reduction in GHG emissions of approximately 1,500 tonnes per year.
- Shore power for cruise ships: a reduction in GHG emissions of up to 1,300 tonnes per year.
- **Total**: a reduction in GHG emissions of approximately 2,800 tonnes, corresponding to 700 passenger motor vehicles (cars or vans).

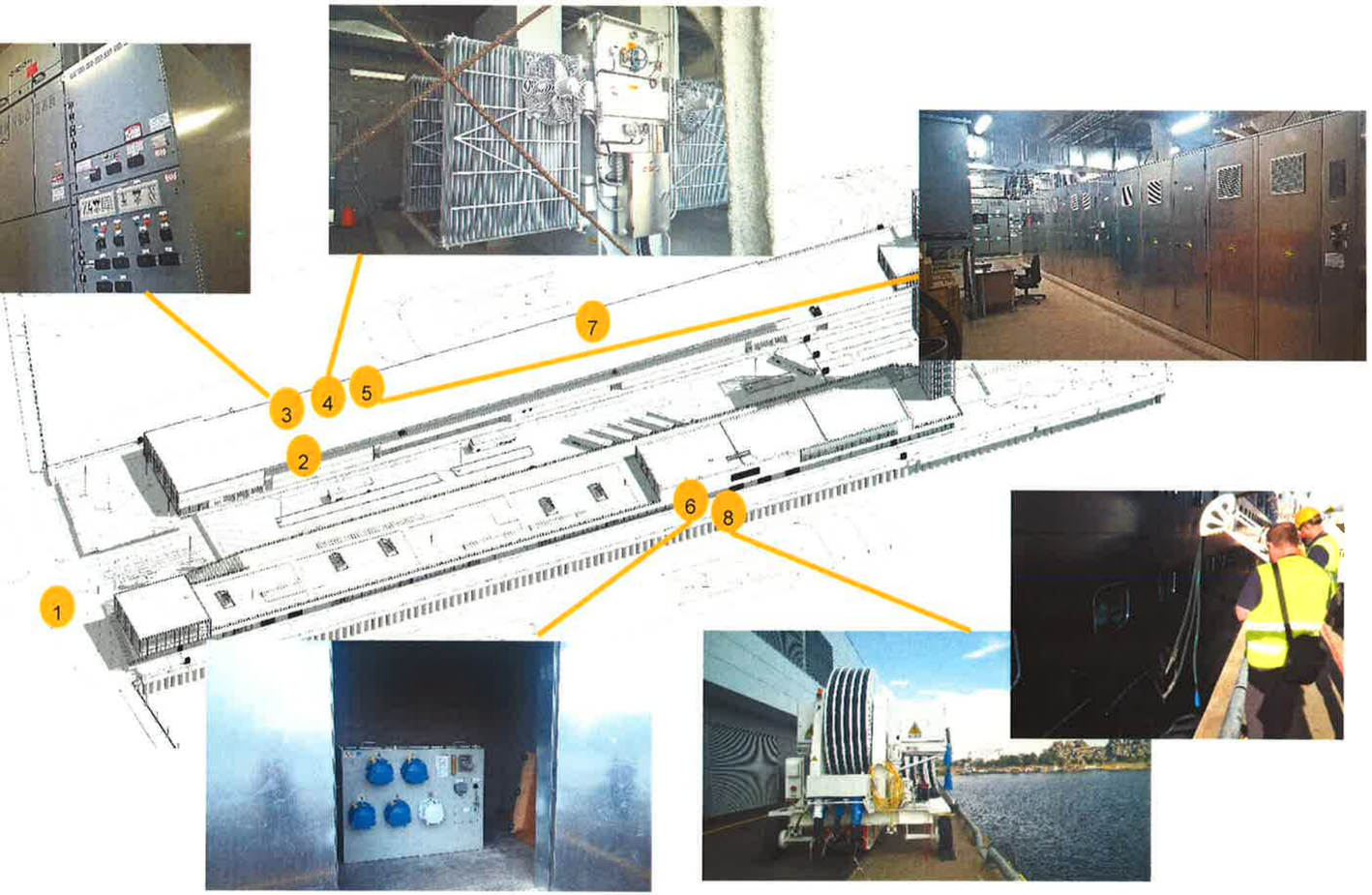
Enhanced offering for shipowners and cruise lines: provide a modern, efficient new cruise terminal with improved service.

PART 1 OF THE PROJECT : SHORE POWER FOR WINTERING VESSELS

In 2016, the MPA developed four power supply stations at berths 25, 27, 29 and M2 for vessels that winter at the Port.

PART 2 OF THE PROJECT: SHORE POWER FOR CRUISE SHIPS

To provide a sufficiently powerful power supply for cruise ships, Hydro-Québec installed a new 25 kV line to supply the new substation installed at the cruise terminal in 2016. On July 29, the first connection took place. The electrical load to supply the cruise ship on July 29 was the equivalent, in a single connection, to supplying a small town with about 2,500 houses or apartments.



1. Connection to HQ power grid
2. Public utility switch gear
3. Switch gear 25kV (Cold Ironing electrical substation)
4. Power transformer (Cold Ironing electrical substation)
5. Switch gear 15 kV and capacitors (Cold Ironing electrical substation)
6. Connection box South
7. Connection box Nord
8. *Alternative main power* (mobile shore power system that connects cruise vessels to shore power)